

The Impact of Public Functional Expenditures on Economic Growth in Jordan during the Period (1993- 2013)

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Abstract

This research aims to determine the impact of public (governmental) expenditures in achieving economic growth in the Hashemite Kingdom of Jordan during the time period (1993-2013), through the study of the functional distribution of these expenditures (both current and capital) in the sectors of Education, Health, Economic Affairs, and Housing and Utilities community, and to determine the contribution of each one of these sectors in achieving economic growth, and then identifying the impact of each one of them on economic growth. Two mathematical models have been designed to measure this effect, the first one measures the impact of the current functional expenses, and the other model measures the impact of capital expenditures in achieving economic growth in Jordan. The researcher used a statistical system (E-Views) to measure this effect by applying the least squares method (OLS), and the relative weight of each functional expenditure has been identified (current and capital) compared with the total of these expenses. The (Unit Root Test) was used to ascertain the extent of stationary in time series data, and the multiple regression models to measure and assess the impact of the current and capital functional expenses in achieving economic growth. We found that there is a statistically significant effect at the level of importance (0.05) for the current functional expenses in the areas of health and economic affairs, and at the level of importance (0.10) in the areas of housing and community facilities, and that there is no statistically significant impact for the current expenses in the area of education in achieving economic growth in Jordan. As it turns out, that there is a statistically significant effect at the level of importance (0.05) of the capital functional expenses in the areas of health, economic affairs, and that there is no statistically significant effect of the expenses in the areas of education, housing and community facilities in achieving economic growth in Jordan .The results showed that current and capital expenditure on education has failed to enhance economic growth, Because of the high cost of education, especially private education in the various stages of education, and especially in the higher education in Jordan, as well as the growing rate of unemployment. As we noted that expenditures on health and economic affairs should be encouraged due to their positive contributions in achieving economic growth.

Keywords: Economic Growth, Capital Expenditure, Current Expenditure Education

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Introduction

The budget defined as the government's plan for the next financial year to achieve the national pursued goals within a medium-term fiscal framework, and it includes the amount of money collected (revenues) and the amounts spent by the government (expenditures). In the case of revenues exceeded expenditures, results what is called the "budget surplus." In the case of Expenditures exceeded revenues, results what is called the "budget deficit", and that prompting the government to borrow money for the implementing of its programs and activities which contribute in improving the citizens' standard of living of and raising the level of services provided to them.

Budget Classification

Based on the accounts map approved by the budget department, general budget has been classified to include the following classifications:

1. Funding Classification.
2. Regulatory Classification.
3. Functional classification.
4. Programs Classification.
5. Geographical Classification.
6. Economical classification.

According to the economical classification, expenses were as follows:

- Compensation of employees (Salaries and wages and bonuses, Social security contributions),
- Usages of goods and services (Interest, Benefits of Foreign Affairs, Benefits of the Interior),
- Subsidies (Subsidies to public institutions, non-financial, Subsidies to private non-financial institutions, Subsidies to support the goods),
- Support and grants (Support for general government units), Social benefits (Retirement and compensation, Social assistance).

Depending on the functional classification, public expenditures (current and capital) have been classified as shown in the following table:

Table 1: Functional Classification Summary of Public Expenditures Classified by Departments and Functional Groups

| Zip Code | Functional Section | Functional Code | Functional Group | Current Expenses | Capital Expenses | Total Expenses |
|----------|----------------------------------|-----------------|---|------------------|------------------|----------------|
| 704 | Economic Affairs | 7041 | Economic & Business affairs and public employment | | | |
| | | 7042 | Agriculture , forestry, fishing and hunting | | | |
| | | 7043 | Fuel and Energy | | | |
| | | 7044 | mining, manufacturing and construction | | | |
| | | 7045 | Transportation | | | |
| | | 7046 | Communications | | | |
| | | 7047 | Other Industries | | | |
| | | 7048 | Economic Affairs classified elsewhere | | | |
| <hr/> | | | | | | |
| 706 | Housing and community facilities | 7062 | Community Development | | | |
| | | 7063 | Water supply | | | |
| | | 7066 | Housing and community facilities not classified elsewhere | | | |
| <hr/> | | | | | | |
| 707 | Health | 7071 | health products and medical devices and equipment | | | |
| | | 7072 | Outpatient services | | | |
| | | 7073 | Hospital services | | | |
| | | 7074 | Public health services | | | |

| | | | | | | |
|------------|-----------|------|--|--|--|--|
| | | 7075 | Research and development in the health field | | | |
| | | 7076 | Public health affairs classified elsewhere | | | |
| | | | | | | |
| 709 | Education | 7091 | Education pre-primary and primary education | | | |
| | | 7092 | Secondary education | | | |
| | | 7094 | Higher education | | | |
| | | 7095 | Education without a specified level | | | |
| | | 7096 | Assistance services for education | | | |

Source: Department of the general budget, a draft of Jordanian budget for the year 2014.

Economic Growth

Economic growth is defined as " an increase in income or real gross national product (GNP) over time, and it is measured by the growth rate in the gross national product or real national income, and economic growth is achieved by increasing the capacity of the country's economy to produce various goods and services, and as the economic growth rate is greater than the population growth rate, it is the better for the benefit of individuals, because that would increase their standards of living, and we can define GNP as " the value of the total output of final goods and services of all kinds - whether are consumption or investment - produced by the community during a certain period mostly is a year, this concept includes all natural persons who hold citizenship of the country, whether they are residents inside or outside the country during the assessment period.

Problem Statement

Most countries apply their fiscal policies through taxing and the ability to control and direct their public spending (both current and capital expenses) towards achieving their economic and social development goals. They can do that by controlling the size of these expenses and how to distribute them on the different spending aspects to achieve their multiple functions. Therefore, this study seeks to answer the following question: (What is the impact of the public functional public spending (current and capital) in achieving the economic growth in Jordan).

Research objectives

This research aims to identify the impact of the public spending in achieving economic growth in the Hashemite Kingdom of Jordan during the time period (1993-2013), through the study of the functional distribution of these expenditures in its current and capital composition in the functions of Education, Health, Economic Affairs, and Housing and community Utilities, by determining the contribution of each functional expense in achieving economic growth, and then identify the impact of each one of them on economic growth.

Literature Review

Bose et al.(2003) examined the growth effects of government expenditure for a panel of thirty developing countries over the decades of the 1970s and 1980s, with a particular focus on sectorial expenditures. They found that the share of government capital expenditure in GDP is positively and significantly correlated with economic growth, but current expenditure is insignificant. Secondly, at the sectorial level, government investment and total expenditures in education are the only outlays that are significantly associated with growth once the budget constraint and omitted variables are taken into consideration.

Fanandetal. (2004) by using district-level data for 1992, 1995, and 1999, they estimated effects of different types of government expenditure on agricultural growth and rural poverty in Uganda. The results revealed that government spending on agricultural research and extension improved agricultural production substantially.

Government spending on rural roads also had substantial marginal impact on rural poverty reduction. Education's effects rank after agricultural research and extension, and roads. Government spending on health did not show a large impact on growth in agricultural productivity or a reduction in rural poverty, but in part because of difficulties in measuring some of the impacts of this type of investment.

Kuhareta et al. (2005) evaluated impacts of public expenditure on the economic performance of the region Peripheral Slovenia by constructing a regional Input-Output model in the present (2004) and the following (2007) financial perspective. Results showed that the analyzed funds can stimulate a notable economic growth of the Peripheral Slovenia especially in the following financial perspective. However; comparisons of the output growth at the national level reveal likely lagging of the region. This means that the anticipated increase of regional development disparities in Slovenia would continue in the future.

Loizides and Vamvoukas (2005) sought to examine if the relative size of government (measured as the share of total expenditure in GNP) can be determined to Granger cause the rate of economic growth, or if the rate of economic growth can be determined to Granger cause the relative size of government. Using data on Greece, UK and Ireland, the analysis showed that: 1) government size Granger causes economic growth in all countries of the sample in the short run and in the long run for Ireland and the UK; 2) economic growth Granger causes increases in the relative size of government in Greece, and, when inflation is included, in the UK.

Vuale and Suruga (2005) concerned the interaction effect of FDI and public expenditure on economic growth rate, they found there is evidence that excessive spending in public expenditures can hinder the beneficial impact of FDI, they examined also some other potential relationships between FDI and public expenditure and proposed that more efforts should be contributed in building a theoretical model which presents the interrelationship between these factors in determining the long-term economic growth rate.

Boustan and others (2009) found that some investments in education raise growth, and a positive growth effect of exogenous shocks to investments in four-year college education, for all U.S. states. But didn't find that exogenous shocks to investment in two-year college education increase growth. This suggests that the money would be used equally productively elsewhere.

We find that exogenous shocks to research-type education have positive growth effects only in states fairly close to the technological frontier. In part, this is because research-type investment shocks induce the beneficiaries of such education to migrate to close-to-the frontier states from far-from-the-frontier states.

Olopade & other (2010) assessed how fiscal and monetary policies influence economic growth and development in Nigeria. The essence of the study is to determine the components of government expenditure that enhance growth and development, identify those that do not, and recommend those that should be cut or reduced to the barest minimum. This study found that no significant relationship between most of the expenditure components on economic growth and development. The estimated result was mixed in particular, some of the variables were weakly significant as a result of none inclusion of effect of environmental impacts.

Yildirimetal. (2011) studied the effect of government expenditures on economic growth as one of the key issues in economic literature. He performed the causality analysis proposed by Toda and Yamamoto (1995) in order to explore causal relationship between public education expenditures and economic growth in Turkey over the period 1973-2009. The empirical results based on Toda and Yamamoto (1995) causality analysis show that the relationship between government expenditures and growth is not in the form of bi-directional causation as causality runs only from economic growth to educational spending but not expenditures on education to economic growth.

Desmond (2012), examined the effect of public expenditure on economic in Nigeria for the period 1970 – 2009. Results of the analysis showed that capital and recurrent expenditure on economic services had insignificant negative effect on economic growth during the study period. Also, capital expenditure on transfers had insignificant positive effect on growth. But capital and recurrent expenditures on social and community services and recurrent expenditure on transfers had significant positive effect on economic growth. Consequently, the study recommended more allocation of expenditures to the services with significant positive effect. Olabisi and other (2012) explored the relationship between the composition of public expenditure and economic growth in Nigeria. They analyzed the relationship between public expenditure compositions from 1960 to 2008 on economic growth using the vector Autoregressive models (VAR).

The finding showed that expenditure on education has failed to enhance economic growth due to the high rate of rent seeking in the country as well as the growing rate of unemployment. They also noted that expenditure on health and agriculture should be encouraged due to their positive contributions to growth.

Patricia and other (2013) investigated the effects of public expenditure in education on economic growth in Nigeria over a period from 1977 to 2012, with particular focus on disaggregated and sectorial expenditures analysis. They found that Total Expenditure on Education is highly and statistically significant and have positive relationship on economic growth in Nigeria in the long run. They concluded that economic growth is clearly impacted by factors both exogenous and endogenous to the public expenditure in Nigeria, and recommended that, there is need for government to reduce its budgetary allocation to recurrent expenditure on education and place more emphasis on the capital expenditures so as to accelerate economic growth of Nigeria and that Government should direct its expenditure towards the productive sectors like education as it would reduce the cost of doing business as well as raise the standard living of poor ones in the country.

Research Hypotheses

This research is based on two main hypotheses: the first states that (the current productive expenditures contribute in achieving economic growth in Jordan, and from this main hypothesis, it is Branching off sub- hypotheses as follows:

1. The current productive expenses on the education sector Contribute in achieving the economic growth in Jordan.
2. The current productive expenses on the health sector Contribute in achieving the economic growth in Jordan.
3. The current productive expenses on the economic affairs sector Contribute in achieving the economic growth in Jordan.
4. The current productive expenses on the housing and community facilities sector Contribute in achieving the economic growth in Jordan.

Where the second main hypotheses (the capital productive expenditures contribute in achieving economic growth in Jordan, and from this main hypotheses, we branch off the following sub- hypotheses:

1. The capital productive expenses on the education sector Contribute in achieving the economic growth in Jordan.
2. The capital productive expenses on the health sector Contribute in achieving the economic growth in Jordan.
3. The capital productive expenses on the economic affairs sector Contribute in achieving the economic growth in Jordan.
4. The capital productive expenses on the housing and community facilities sector Contribute in achieving the economic growth in Jordan.

Research Variables Definition

| variables symbols | Variables explanations | Measure ment unit |
|-------------------|---|-------------------|
| RGDP | Real GDP | Ln RGDP |
| CRL | current expenditure on education | Ln CRL |
| CRH | current expenditure on health | Ln CRH |
| CRE | current expenditure on economic affairs | Ln CRE |
| CRS | current expenditure on housing and community facilities | Ln CRS |
| ao,a1,a2,a3,a4 | 1 st model coefficients | |
| CAL | capital spending on education | Ln CAL |
| CAH | capital spending on health | Ln CAH |
| CAE | capital expenditure on economic affairs | Ln CAE |
| CAS | capital spending on housing and social facilities | Ln CAS |
| bo,b1,b2,b3,b4 | 2 nd model coefficients | |

Source: Author computation.

Model Specification

The following two models represent the effect of the independent variables on the dependent variable, as follows:

$$\text{Ln RGDP} = a_0 + \text{Ln } a_1\text{CRL} + \text{Ln } a_2\text{CRH} + \text{Ln } a_3\text{CRE} + \text{Ln } a_4\text{CRS... (1)}$$

$$\text{Ln RGDP} = b_0 + \text{Ln } b_1\text{CAL} + \text{Ln } b_2\text{CAH} + \text{Ln } b_3\text{CAE} + \text{Ln } b_4\text{CAS... (2)}$$

The model number (1) determines the effect of the independent variables which represent the current expenditures on each one of the (education, health, economic affairs, and housing and community facilities) sectors, on the dependent variable (real GDP). By calculating the Ln of these variables.

The 2nd model measures the effect of each one of the independent variables representing the capital expenditures on the (education, health, economic affairs, and housing and community facilities) on the dependent variable (real GDP). By calculating the Ln of these variables.

Research Methodology

This research applies the descriptive and econometrics analysis approach in determining the impact of governmental productive expenditures on economic growth in Jordan during the time period (1993 - 2013) , and so that we use the multiple regression method, which is being estimated by the least squares method (OLS), through applying the statistical program (E -Views) on the time series data, that have been collected about some components of the governmental productive expenditures and real GDP during the period of the study , which was collected through the issued Bulletins of the general budget, and the annual and final accounts of the Kingdom, obtained from the General Budget Department, and the annual national accounts issued by Department of Statistics.

In addition to access to the relevant previous studies conducted on Jordan and other countries around the world. Where the research tries to determine the impact of total public expenditures, and the impact of each one of current and capital expenses partially on the economic growth in Jordan during the studyperiod.

Relative Distribution of Current Functional Expenses

Table 2: The Percentages of Current Expenditures by Functional Distribution During the Research Period

| Year | TCE | TCE/TE | CL/TCE | CH/ TCE | CE/ TCE | CS/ TCE |
|-------------------------|---------|--------|--------|---------|---------|---------|
| 1993 | 1044.29 | 0.7813 | 0.1208 | 0.0550 | 0.0410 | 0.0092 |
| 1994 | 1115.16 | 0.7786 | 0.1373 | 0.0083 | 0.0425 | 0.0098 |
| 1995 | 1220.44 | 0.7604 | 0.1440 | 0.0100 | 0.0417 | 0.0098 |
| 1996 | 1296.63 | 0.7598 | 0.1491 | 0.0099 | 0.0177 | 0.0097 |
| 1997 | 1438.00 | 0.8122 | 0.1418 | 0.0083 | 0.0158 | 0.0090 |
| 1998 | 1620.53 | 0.7873 | 0.1267 | 0.0077 | 0.0145 | 0.0084 |
| 1999 | 1643.10 | 0.8056 | 0.1595 | 0.0298 | 0.0196 | 0.0037 |
| 2000 | 1851.30 | 0.8465 | 0.1490 | 0.0215 | 0.0199 | 0.0035 |
| 2001 | 1851.30 | 0.8209 | 0.1560 | 0.0297 | 0.0256 | 0.0037 |
| 2002 | 1899.90 | 0.7929 | 0.1624 | 0.0167 | 0.0232 | 0.0040 |
| 2003 | 2163.70 | 0.7701 | 0.1543 | 0.0111 | 0.0176 | 0.0044 |
| 2004 | 2377.80 | 0.7476 | 0.1497 | 0.0307 | 0.0189 | 0.0013 |
| 2005 | 2908.00 | 0.8217 | 0.1320 | 0.0236 | 0.0158 | 0.0010 |
| 2006 | 3118.10 | 0.7970 | 0.1318 | 0.0326 | 0.0151 | 0.0011 |
| 2007 | 3743.90 | 0.8163 | 0.1302 | 0.0294 | 0.0129 | 0.0010 |
| 2008 | 4473.40 | 0.8235 | 0.1137 | 0.0183 | 0.0148 | 0.0038 |
| 2009 | 586.60 | 0.7605 | 0.1131 | 0.0232 | 0.0171 | 0.0038 |
| 2010 | 4746.60 | 0.8316 | 0.1215 | 0.0133 | 0.0220 | 0.0195 |
| 2011 | 5739.50 | 0.8445 | 0.1192 | 0.0143 | 0.0193 | 0.0160 |
| 2012 | 6202.80 | 0.9018 | 0.1263 | 0.0082 | 0.0173 | 0.0028 |
| 2013 | 6210.10 | 0.8329 | 0.1416 | 0.0164 | 0.0180 | 0.0031 |
| Average | | 0.8044 | 0.1371 | 0.0199 | 0.0214 | 0.0061 |
| Percentage of 4 sectors | | 0.9889 | | | | |

Source: Author computation.

The table above shows the financial ratios of the functional distributions of the current public expenses, we note that the average percentage of spending on the four sectors (education, health, economic affairs, housing and community facilities) accounts for (98.89%) of the total current expenditures during the years of the study (1993-2013) which seems very high, and that means most of the current functional expenditures dedicated to be spent on these main four sectors.

The current expenditure on education has won (80.44%) of the total current expenditures, followed by the current expenditure on health has been accounted for (13.71%), then the current expenditure on economic affairs by (2.14%), and finally the current expenditure on housing and community facilities by (0.61%).

Relative Distribution of Capital Functional Expenses

Table 3: The Percentages of Capital Expenditures by Functional Distribution During the Research Period

| Total capital expenses | Education % | Health % | Economic affair % | Housing % |
|------------------------|-------------|----------|-------------------|-----------|
| 292.29 | 0.0549 | 0.0473 | 0.4592 | 0.1858 |
| 317.05 | 0.0292 | 0.0371 | 0.4795 | 0.2266 |
| 384.50 | 0.0317 | 0.0360 | 0.4201 | 0.2106 |
| 410.00 | 0.0313 | 0.0434 | 0.4392 | 0.2079 |
| 332.48 | 0.0357 | 0.0772 | 0.2920 | 0.2413 |
| 437.68 | 0.0286 | 0.0690 | 0.2444 | 0.1622 |
| 396.40 | 0.1234 | 0.1163 | 0.2460 | 0.2896 |
| 335.80 | 0.1185 | 0.1176 | 0.2513 | 0.2162 |
| 403.80 | 0.1362 | 0.1206 | 0.1914 | 0.1751 |
| 496.30 | 0.0639 | 0.1068 | 0.1783 | 0.1352 |
| 646.10 | 0.0373 | 0.0814 | 0.1501 | 0.1076 |
| 802.70 | 0.0909 | 0.0771 | 0.2975 | 0.0348 |
| 630.90 | 0.1086 | 0.0802 | 0.3761 | 0.0338 |
| 794.10 | 0.1281 | 0.1395 | 0.3517 | 0.0307 |
| 842.60 | 0.1305 | 0.1373 | 0.3265 | 0.0395 |
| 958.50 | 0.0854 | 0.1451 | 0.3820 | 0.1584 |
| 1444.50 | 0.0737 | 0.1603 | 0.3283 | 0.1898 |
| 961.40 | 0.0657 | 0.1536 | 0.3650 | 0.1756 |
| 1057.10 | 0.0777 | 0.1447 | 0.3879 | 0.1515 |
| 675.40 | 0.0751 | 0.1538 | 0.4942 | 0.2233 |
| 1245.60 | 0.0816 | 0.1183 | 0.3449 | 0.2182 |
| Average 0.0065 | 0.0766 | 0.1029 | 0.3336 | 0.1625 |

Source: Author computation.

We note that from the table of the percentages of capital functional expenses on the sectors of (education , health , economic affairs , housing and community facilities), they formed about (67.56 %) of the total capital expenditures during the years of the study , which is acceptable to some extent , but when compared to the percentage of current expenditures which account for (98.89 %), we find that this percentage is low compared with that of current spending on these vital productive sectors in the Jordanian economy. As also noted that the relative distribution of each one of these four sectors, was as follows: the percentage of capital expenditure on education was (7.66 %) of the total capital expenditures represents the lowest percentage among the four sectors, and spending on health amounted rate is (10.29 %), as well as spending on economic Affairs won the highest rate which reached (33.36 %) of the total capital expenditures, and finally spending on housing and community facilities reached (16.25 %) of the total capital expenditures, came in the second rank.

Statistical Analysis and Interpretation

1. Unit Root Test Results (Model No. 1)

Stationary of the expletory variables and dependent variable for the model number 1, (Ln RGDP) was tested using Augmented Dickey Fuller (ADF) test. Table (4) views the results which indicate the rejection of the unit root null hypothesis of the stationary of the Ln of (CRL, CRH, CRE, CRS) and RGDP at the first difference.

Table 4: Unit Root Test Result

| Variables | ADF Statistics | P- Value | Order of Integration |
|-----------|----------------|----------|----------------------|
| Ln RGDP | -4.180356 | 0.0048 | I (1) |
| Ln CRL | -4.815919 | 0.0013 | I (1) |
| Ln CRH | -4.713782 | 0.0016 | I (1) |
| Ln CRE | -3.581716 | 0.0182 | I (1) |
| Ln CRS | -3.848775 | 0.0115 | I (1) |

Note: All of the variables are statistically significant at 5%.

Source: Author computation from computer output.

2. Hypothesis Testing

The results in table (5) below, show that the current expenses on health and economic affairs are statistically significant at 5 percent level, and the current expenses on housing and social affairs is statistically significant at 10 percent with an inverse relationship with the dependent variable. The effect of current expenses on education on real GDP is statistically insignificant. The R-squared 0.989691 implies that 98.97 percent of total variation in Real GDP is explained by the regression equation. At the same time, the goodness of fit of the regression remained too high after adjusting for the degrees of freedom as indicated by the Adjusted R-squared 0.987114 which is (98.71) percent. The F-statistic 384.005, which is a measure of the joint significant of the explanatory variables, is found to be statistically significant at 5 percent as indicated by the corresponding probability value (0.0000).

Table 5: Coefficients of Independent Variables of Current Expenses

| The relation direction | The significant effect | Sig .T Cn | B | Cn |
|-------------------------------|--|------------------|-----------|-------------------|
| Positive | Statistically Significant | 0.000 | 5.939962 | Constant C |
| Positive | Statistically Insignificant | 0.9379 | 0.008832 | CRL |
| Positive | Statistically Significant | 0.000 | 0.456401 | CRH |
| Positive | Statistically Significant | 0.0138 | 0.102761 | CRE |
| Inverse | Statistically Significant at 0.10 level. | 0.0906 | -0.022788 | CRS |

Source: Author computation from computer output.

$$\ln \text{ GDP} = 0.989691 + 0.008832\text{CRL} + 0.456401\text{CRH} + 0.102761\text{CRE} - 0.022788\text{CRS} \dots(1)$$

Table 6: Hypotheses Testing Results

| Hypotheses No. | The hypotheses | The result |
|------------------------------------|---|------------|
| The first main hypotheses | The total current expenses contribute in achieving economic growth in Jordan. | |
| 1 st partial hypotheses | Current expenses on education contribute in achieving economic growth in Jordan. | Rejected |
| 2 nd partial hypotheses | Current expenses on health contribute in achieving economic growth in Jordan. | Accepted |
| 3 rd partial hypotheses | Current expenses on economic affairs contribute in achieving economic growth in Jordan. | Accepted |
| 4 th partial hypotheses | Current expenses on housing and social affairs contribute in achieving economic growth in Jordan. | Accepted |

3. Unit Root Test Results (Model No. 2)

Stationary of the expletory variables and dependent variable for the model number 2, (Ln RGDP) was tested using Augmented Dickey Fuller (ADF) test. Table () views the results which indicate that the rejection of the unit root null hypothesis of stationary of the Ln of (CAL, CAH, CAE, CAS) and Ln RGDP at the first difference.

Table 7: Unit Root Test Results (Model No. 2)

| Variables | ADF Statistics | P- Value | Order of Integration |
|-----------|----------------|----------|----------------------|
| Ln RGDP | -6.463527 | 0.0001 | I (|
| Ln CAL | -3.255322 | 0.0366 | I (1) |
| Ln CAH | -5.085001 | 0.0009 | I (1) |
| Ln CAE | -8.449480 | 0.0000 | I (1) |
| Ln CAS | -5.046358 | 0.0009 | I (1) |

Note: All of the variables are statistically significant at 5%.

Source: Author computation from computer output.

4. Hypothesis Testing

The results in table (8) show that the capital expenses on health and on economic affairs are statistically significant at 5 percent level, while the capital expenses on education and on housing and social affairs are statistically insignificant with an inverse relationship with the dependent variable. The R-squared 0.949605 implies that 94.61 percent of total variation in Real GDP is explained by the regression equation. At the same time, the goodness of fit of the regression remained too high after adjusting for the degrees of freedom as indicated by the Adjusted R-squared 0.937006 which is (93.70) percent. The F-statistic 75.37, which is a measure of the joint significant of the explanatory variables, is found to be statistically significant at 5 percent as indicated by the corresponding probability value (0.0000).

Table 8: Coefficients of Independent Variables of Current Expenses

| The relation direction | The significant effect | b.T Cn | B | Cn |
|------------------------|------------------------------|--------|------------|--------|
| Positive | Statistically Significant | 0.0000 | 6.805877 | tant C |
| Inverse | Statistically Insignif | 0.8470 | - 0.013813 | CAL |
| Positive | Statistically Significant | 0.0001 | 0.371854 | CAH |
| Positive | Statistically Signific | 0.0321 | 0.113806 | CAE |
| Inverse | Statistically Insignif at | 0.6782 | -0.016527 | CAS |

Source: Author computation from computer output.

$$\ln \text{GDP} = 6.805877 - 0.013813\text{CAL} + 0.371854\text{CAH} + 0.113806\text{CAE} - 0.016527\text{CAS}. (2).$$

Table 9: Hypotheses Testing Results (2nd Model)

| Hypotheses No. | The hypotheses | The results |
|------------------------------------|---|-------------|
| The first main hypothesis | The total capital expenses contribute in achieving economic growth in Jordan. | |
| 1 st partial hypotheses | Capital expenses on education contribute in achieving economic growth in Jordan. | Rejected |
| 2 nd partial hypotheses | Capital expenses on health contribute in achieving economic growth in Jordan. | Accepted |
| 3 rd partial hypotheses | Capital expenses on economic affairs contribute in achieving economic growth in Jordan. | Accepted |
| 4 th partial hypotheses | Capital expenses on housing and social affairs contribute in achieving economic growth in Jordan. | Rejected |

Results and Recommendations

The Research analysis shows that the following results:

1. There is a statistically significant impact at the level of importance (0.05) of the current expenses in the functional areas of health and economic affairs in achieving economic growth in Jordan.
2. There is a statistically significant impact at the level of importance (0.10) of the current expenses in the functional areas of housing and community facilities in achieving economic growth in Jordan.
3. There is no statistically significant impact at the level of importance (0.10) of the current expenses in the functional areas of education in achieving economic growth in Jordan.
4. There is a statistically significant impact at the level of importance (0.05) of the capital expenditures in the functional areas of health and economic affairs in achieving economic growth in Jordan.
5. There is no statistically significant impact at the level of importance (0.05) of the capital expenditures in the functional areas of education, housing and community facilities in achieving economic growth in Jordan.

The results showed that current and capital expenditures on education have failed to enhance economic growth, Because of the high cost of education, especially private education in the various stages of education, especially in higher education in Jordan, as well as the growing rate of unemployment, Resulting from the lack of alignment between the education outputs and the labor market requirements, which requires to reconsider many of the taught disciplines in the Jordanian universities, in which the number of graduates overflows the real need of the labor market. As we noted that expenditures on health and economic affairs should be encouraged due to their positive contributions to growth. The researcher believes that the weak contribution of the housing sector and community facilities in the achievement of economic growth, may be due in part to the nature of investment in the housing sector, in which the private sector holds the lion's share, and that sector does not contribute effectively in the real production activity, and this matter is linked to two basic points, high cost of housing buildings for the majority of citizens and limited number of citizens being able to own them, and the other point is that most of the workers in this sector are expats who are not citizens, which does not show its impact on the benefit of the domestic workers.

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Appendixes

Dependent Variable: Ln RGDP

Method: Least Squares

Date: 04/16/14 Time: 20:10

Sample: 1993 2013

Included observations: 21

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|-----------|
| Ln CRL | 0.008832 | 0.111556 | 0.079173 | 0.9379 |
| Ln CRH | 0.456401 | 0.075119 | 6.075669 | 0.0000 |
| Ln CRE | 0.102761 | 0.037178 | 2.764021 | 0.0138 |
| Ln CRS | -0.022788 | 0.012656 | -1.800618 | 0.0906 |
| C | 5.939962 | 0.214306 | 27.71724 | 0.0000 |
| R-squared | 0.989691 | Mean dependent var | | 8.768095 |
| Adjusted R-squared | 0.987114 | S.D. dependent var | | 0.377818 |
| S.E. of regression | 0.042889 | Akaike info criterion | | -3.256133 |
| Sum squared resid | 0.029432 | Schwarz criterion | | -3.007438 |
| Log likelihood | 39.18940 | Hannan-Quinn criter. | | -3.202160 |
| F-statistic | 384.0050 | Durbin-Watson stat | | 2.344072 |
| Prob(F-statistic) | 0.000000 | | | |

Dependent Variable: GDP
 Method: Least Squares
 Date: 04/16/14 Time: 20:26
 Sample: 1993 2013
 Included observations: 21

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|----------|-------------|------------|-------------|--------|
| KL | -0.013813 | 0.070436 | -0.196104 | 0.8470 |
| KH | 0.371854 | 0.073008 | 5.093314 | 0.0001 |
| KE | 0.113806 | 0.048490 | 2.347001 | 0.0321 |
| KS | -0.016527 | 0.039109 | -0.422584 | 0.6782 |
| C | 6.805877 | 0.215015 | 31.65297 | 0.0000 |

| | | | |
|--------------------|----------|-----------------------|-----------|
| R-squared | 0.949605 | Mean dependent var | 8.768095 |
| Adjusted R-squared | 0.937006 | S.D. dependent var | 0.377818 |
| S.E. of regression | 0.094827 | Akaike info criterion | -1.669268 |
| Sum squared resid | 0.143875 | Schwarz criterion | -1.420573 |
| Log likelihood | 22.52732 | Hannan-Quinn criter. | -1.615295 |
| F-statistic | 75.37258 | Durbin-Watson stat | 1.741351 |
| Prob(F-statistic) | 0.000000 | | |
